



BIOLOGY >> Evolution

Q 1 The random change in allele frequencies is known as?

A genetic drift

B diversity

C linkage

D all of these

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Time Remaining:



Question 2/210

BIOLOGY >> Life processes in animals and plants (Nutrition/Gaseous exchange/Transport)

Q 2

The attraction between water molecules is termed as:

A

cohesion

B

tension

C

adhesion

D

imbibition

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Q 3 What is the color of Xanthophyll pigment?

A Yellow

B Red

C Orange

D Green

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Q 4

The substrate concentration that produces exactly half of the maximum reaction rate can be described by?

A

Michaelis equation

B

Menten equation

C

Bernoulli equation

D

Michaelis-Menten equation

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Q 5 The function of spleen is to filter ---

A Blood

B Lymph

C Semen

D Amniotic fluid

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Q 6 Which of the following system is well-developed in acoelomates?

A excretory

B nervous

C transport

D both a and b

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Q 7 The type of plastids found in roots of plants _____ .

A Chloroplasts

B Chromoplasts

C Leucoplasts

D All of them

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Q 8

Which one of the following biomolecules is most abundant in animals?

A

Starch

B

glycogen

C

cellulose

D

both a and b

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Q 9 Which of the following molecules is reduced?

A NAD⁺

B FAD

C O₂

D NADPH

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Q 10 Roots of a plant show which of the following?

A Positive phototropism and negative geotropism

B Negative tactic movement and positive tropic movement

C Positive geotropism of stem and roots

D Negative phototropism and positive geotropism

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Q 11

Phagocytosis is a form of _____. During phagocytosis, the cell membrane folds inwards in the form of a vacuole to engulf solid particles.

A

Pinocytosis

B

Exocytosis

C

Endocytosis

D

Erythrocytosis

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Q 12

A neuron located in the central nervous system that projects its axon outside the CNS is called:

A

Motor nerve

B

sensory nerve

C

Both A and B

D

Mixed nerve

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Q 13 Pilli hollow appendages in bacteria are basically functions in

A motility

B conjugation

C chemical detection

D None of above

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Q 14

Which of these transports sperm from the testis to the penis?

A sperm duct

B scrotum

C urethra

D gamete

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Q 16

HIV AIDS is caused by which viruses?

A

human immunodeficiency virus

B

retroviruses

C

influenza Virus

D

paramyxoviruses

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Q 17 A reflex action involving two or more interneurons between sensory and motor motor neuron is called:

A Monosynaptic reflex

B Polysynaptic reflex

C Hemi Synaptic reflex

D None of these

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Q 18

A gene pool is disturbed by which of the following?

A

Emigration

B

immigration

C

pan migration

D

both a and b

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Q 19

Filial is a Latin word. It means which of the following?

A

spring

B

issue

C

progeny

D

none of these

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Q 20 Choose the function irrelevant to oral cavity:

A Grinding

B Lubrication

C Absorption

D Digestion

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Q 21

What is meant by HIV-Positive ?

A

a person have AIDS

B

a person having two positive tests for HIV

C

a person can transmit the HIV

D

a person is safe from AIDS

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Q 22

Where does the AIDS virus infect?

A

RBCs

B

WBCs

C

Leukocytes

D

none

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Q 23

Biological molecules which catalyze a biochemical reaction and remain unchanged after completion of reaction are called?

A cofactor

B coenzymes

C activator

D enzymes

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Q 24 Which of following system is segmentally arranged in annelids?

A excretory system

B digestive system

C circulatory system

D nervous system

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Q 25

What is the approximate value of the active membrane potential?

A

0.07V

B

-50 mv

C

0.05 V

D

both a and b

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Q 26

Which viruses can convert normal cells into cancer cells?

A

retrovirus

B

adenovirus

C

Poliovirus

D

All

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Q 27 The male gonads are known as?

A testes

B testosterone

C ovaries

D ovum

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Q 28 Which pigment protein is also known as muscle haemoglobin?

A melanin

B myoglobin

C Rhodopsin

D Lutein

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Q 29

The functional group that best represents ketoses is?

A

CO

B

COOH

C

HCOH

D

HOH

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Q 30

Analogous structures produced as a result of

A

convergent evolution

B

divergent evolution

C

Natural selecting

D

common ancestry

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Q 31 Haemoglobin in man increases the oxygen carrying capacity of the blood to about

A 50 times

B 65 times

C 70 times

D 75 times

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Q 32

Haemoglobin in man increases the oxygen carrying capacity of the blood to about

A 50 times

B 65 times

C 70 times

D 75 times

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Q 32

Haemoglobin in man increases the oxygen carrying capacity of the blood to about

A

50 times

B

65 times

C

70 times

D

75 times

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Q 32

Calcium, during muscle contraction binds with:

A

tropomyosin

B

Troponin C

C

Troponin I

D

Troponin T

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Q 33 The skeleton of the sponges is in the form of variously shaped needle like structures called?

A Stipules

B Brails

C Spines

D Spicules

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Q 34

In enzyme catalytic reaction the substrate is first converted to a high energy state called?

A transition state

B high energy state

C activation state

D breaking point

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Q 35

Photosystem 2 absorbs maximum wavelength of light?

A

750

B

650

C

680

D

670

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Q 36

Which of the following structures helps cyanobacteria to move?

A

flagella

B

capsule

C

gas vesicles

D

all of these

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Q 37 Which type of evolution is represented by analogous organs?

A Divergent evolution

B Straight evolution

C Zig-zag evolution

D Convergent evolution

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Q 38

Cell membrane is chemically composed of lipids and which of the following?

A

protein

B

carbohydrates

C

both a and b

D

none of these

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Q 39

Which of the statement about cell membrane is not true?

A

It contains protein molecules embedded in lipid bilayer

B

It is a differentially permeable membrane

C

It contains charged pores thus ions being charged particles across cell membrane much easier than neutral particles.

D

It may get infolded to engulf solid or liquid material

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Q 40

The brain portion that is reduced in humans is:

A

Forebrain

B

Midbrain

C

Hindbrain

D

Limbic system

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Q 41

A structure which is located between the nucleocapsid and the envelope

A

capsid

B

matrix protein

C

envelop

D

nucleo capsid

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Q 42

The radiations most important to life are called?

A

UV light

B

Visible light

C

both a and b

D

none of these

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Q 43

Which of the following organelles are found in both plant and animal cells?

A

central vacuole

B

tonoplast

C

cell wall

D

peroxisomes

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Q 44

In a dihybrid cross, what fraction of offspring will display both recessive phenotypes?

A

$\frac{1}{8}$

B

$\frac{1}{4}$

C

$\frac{1}{32}$

D

$\frac{1}{16}$

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Q 45

Which of these lobes contains Broca's area, which is associated with speech ability?

A

Frontal

B

Parietal

C

Temporal

D

Occipital

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Q 46 A pure breeding tall pea plant was crossed to dwarf plant what will be the frequency of dwarf plants in F1?

A 0.25

B 0.5

C 0

D 1

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Q 47

The nasal cavity opens outside of the kind of openings that are known as

A

pharynx

B

bronchioles

C

Nostrils

D

None of these

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Q 48

The respiratory chain electron carrier that directly, binds oxygen is ____

A

Cytochrome a

B

cytochrome a3

C

cytochrome c1

D

cytochrome b

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Q 49

Enzymes which are involved in transfer of electrons are known as?

A

oxidases

B

dehydrogenases

C

hydrolyses

D

both a and b

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Q 50 Which is not an example of transmembrane transport between different subcellular compartments?

- A Transport from the stroma into thylakoid space
- B Transport from the cytoplasm into the lumen of the endoplasmic reticulum
- C Transport from mitochondrial intermembrane space into the mitochondrial matrix
- D Transport from the endoplasmic reticulum into the Golgi complex

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Q 51 Which cells produce oogonia in ovary?

A Stromal cells

B Epithelial cells

C Germ cells

D theca cells

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Q 52

All of the following are characteristics of prokaryotic cells except for?

A

unicellularity

B

lack of membrane-bound organelle

C

lack of a nucleus

D

they are usually found in protists and fungi

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Q 53

A muscle of fascicle is a:

A

bundle of connective tissue

B

bundle of myofibrils

C

bundle of muscle fibers

D

muscle cells

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Q 54

Enzyme that are integral part of ribosomes are involved in the synthesis of which of the following molecules?

A

lipids

B

proteins

C

carbohydrates

D

all of these

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Q 55

Which is not the characteristic of triploblastic?

A

They may be coelomate pseudocoelomate or acoelomate

B

They are included in grade bilateria

C

All of them have a digestive system

D

All of them have blood vascular system

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Q 56

The Urey-Miller experiment determined which of the following results?

A

DNA replicates by semiconservative replication

B

Cyanobacteria were responsible for the oxygenation of the atmosphere

C

The early atmosphere was composed of ammonia and methane

D

Organic molecules can arise from inorganic precursors

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Q 57

How are flat worms not similar to round worms?

A They are both acoelomates.

B They are both triploblastic.

C They both show bilateral symmetry.

D They are both worms.

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Q 58

Where does the human body store spermatozoa?

A

Ejaculatory duct

B

Seminal vesicle

C

Seminiferous tubules

D

Epididymis

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Q 59 Which of the following statements explains why viruses are only able to multiply in living cells?

- A binary fission is controlled by host cell genes.
- B Virus do not possess the necessary components for self-replication.
- C DNA is only able to replicate inside living cells
- D They have only enough genetic information for DNA replication

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Q 60

Choose a correct statement among following.

A

spinal reflexes has 4 elements

B

lower motor neurons has cell body in anterior column of grey matter

C

grey matter that lies transversely is lateral commissure

D

spinal cord has 3 equal parts

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Q 61

Globular proteins differ from fibrous proteins in?

A

non-crystalline

B

more amino acids

C

peptide bonds

D

soluble in aqueous medium

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Q 62 Which of the following is not an example of positive feedback?

- A A forest fire slowly expands outward, which provides it with even more fuel to burn.
- B During childbirth, oxytocin creates a stimulus which causes the hypothalamus to release more oxytocin
- C As more buffalo begin to run in a herd, the overall level of panic increases. This results in even more buffalo running.
- D As blood calcium levels increase, parathyroid hormone (PTH) is reduced.

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Q 63

The stomata are closed at which of the following temperature? (In centigrade)

A

45

B

35

C

15

D

25

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Q 64

A mother with blood type A and the genotype "A/O" and a father with blood type B and genotype "B/B" have a child with blood type AB. This is an example of what type of inheritance pattern?

- A Incomplete dominance
- B X-linked autosomal dominance
- C Complete autosomal dominance
- D Codominance

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Q 65

Which type of light causes the highest rate of photosynthesis?

A

blue

B

red

C

orange

D

violet

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Q 66

Fatty acids release considerable amount of energy in oxidation and ____

A

calvin cycle

B

Kreb's cycle

C

dark reaction

D

light reactions

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Q 67

An activated enzyme consisting of the polypeptide chain and co-factors is known as which of the following?

A

apoenzyme

B

holoenzyme

C

coenzyme

D

prosthetic group

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Q 68

The long unbranched, slender tubulin protein is called?

A

microtubules

B

intermediate filament

C

actin

D

all of these

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Q 69

Force acting on a positive charge is always:....

A

in the direction opposite to electric field

B

in the direction of electric field

C

in the direction perpendicular to electric field

D

in the direction perpendicular to the velocity of charge

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Q 72

Unit of instantaneous velocity is

A

 m/s^2

B

 m/s

C

 m

D

 $1/\text{s}$

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Q 72

Unit of instantaneous velocity is

A

 m/s^2

B

 m/s

C

 m

D

 $1/\text{s}$

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Q 71

Two travelling waves of the same frequency, same amplitude and travelling in opposite direction results in:

- A beats
- B standing waves
- C diffraction
- D none of these

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Q 72

Unit of instantaneous velocity is

A

 m/s^2

B

 m/s

C

 m

D

 $1/\text{s}$

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Q 73

Which among the following shows the particle nature of light?

A

Interference

B

Reflection

C

polarization

D

Photoelectric effect

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Q 74 An electrical instrument which is used to measure potential difference between two points is called

A Barometer

B Manometer

C Galvanometer

D Voltmeter

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Q 75

The nucleus is made up of more neutrons than protons

A

H

B

O

C

U

D

none of these

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Q 76

Temperature is defined by

A

first law of thermodynamics

B

Zeroth law of thermodynamics

C

Second law of thermodynamics

D

Third law of thermodynamics

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Q 77

The negative sign in $F = -k.x$, indicates that:

A F is directed opposite to x

B F is directed along x

C F is always equal to x

D none of these

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Q 78

A body is moving in a circle at constant speed. Which statement is true?

A It accelerates away from the centre of the circle

B It accelerates towards the centre of the circle

C It does not accelerate

D none of these

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Q 79

The distance between two point charges if halved, the force between them would be:....

A

half

B

double

C

one fourth

D

four times

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Q 80

The number of diodes in bridge rectifier is

A

4

B

3

C

2

D

5

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Q 81

Which of the following has a negative temperature coefficient of resistance ?

A

Tungsten

B

Carbon

C

Nichrome

D

Platinum

80

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Q 82 Passengers sitting in a stationary car experience a jerk when the car suddenly starts. This is due to

A inertia of motion

B inertia of rest

C inertia of turning

D inertia of acceleration

81

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Q 83

The magnetic flux linked with a coil is inversely proportional to the

A

Area of cross section

B

Number of turns

C

magnetic field

D

none of these

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Q 84

When the antinodes are all at their extreme displacements,

A the energy stored is wholly kinetic

B the energy stored is wholly potential

C the energy stored is kinetic and potential

D the energy stored is wholly chemical

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Q 85

Displacement is a

A

tensor

B

vector

C

scalar

D

None of these

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Q 86

Diffraction is prominent when the wavelength of light is:

A five time small as compared with the size of the obstacle

B large as compared with the mass of the obstacle

C large as compared with the size of the obstacle

D one half as compared with the size of the obstacle

85

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Q 87 Half life of radioactive nuclide is 20 hours. What fraction of original activity will remain after 40 hours?

A $1/2$

B 2

C 4

D $1/4$

86

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Q 88

Which of the following is the unit of mutual inductance?

A

 VsA^{-2}

B

 V^3sA^2

C

 V^2s

D

 VsA^{-1}

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Q 89 A bullet fired from gun can pierce to a target due to

A heat energy

B mechanical energy

C acceleration

D kinetic energy

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Q 90

Galilean transformations are applicable in :

A

All frames

B

frame of reference

C

Non-Inertial frame

D

Inertial frame

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Q 91 Terminal potential difference of a cell

A increases with increase in its internal resistance

B decrease with increase in internal resistance

C is independent of its internal resistance

D None of these

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Q 92

A fixed mass of gas undergoes isochoric (isovolumetric) change. As a result the pressure of the gas has increased. Which of the following is true about the gas?

- A internal energy = decrease direction of transfer of thermal energy = released from the gas
- B internal energy = decrease direction of transfer of thermal energy = absorbed by the gas
- C internal energy = increase direction of transfer of thermal energy = released from the gas
- D internal energy = increase direction of transfer of thermal energy = absorbed by the gas

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Q 93

The wavelength of x-ray is measured by____

A

diffraction

B

interference

C

reflection

D

all of these

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Q 94 A point on a wheel has a constant angular velocity of 3 rad/s . The angle turned through in 15 seconds is:

A 45 rad

B $10\pi \text{ rad}$

C $90\pi \text{ rad}$

D 5 rad

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Q 95 Specific latent heat of fusion of ice is 334 J/g. How much energy is needed to melt 2 kg of ice at 0C.

A $6.68 \times 10^5 \text{ J}$

B $6.68 \times 10^5 \text{ kJ}$

C 668 J

D 668 kJ

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Q 96

Calculate the maximum emf when the velocity is 10m/s , the length is 3m and the magnetic field density is 5T

A 150V B 300V C 100V D 0V

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Q 97

Which equation represents the maximum output power

A

$P = VI$

B

$P = I^2 R$

C

$P = V^2/R$

D

all of these

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Q 98

Magnetic field will not produce in case of

A

charged positive particles

B

charged negative particles

C

neutral particles

D

All of these

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Q 99

The effect of nuclear bomb radiation lasts for

A

few minutes

B

few weeks

C

few days

D

more than 90 Years

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Q 100

Determine the linear velocity of a point rotating at an angular velocity of 12π radians per second at a distance of 8 centimeters from the center of the rotating object.

A 31.6 cm/s

B 301.6 cm/s

C 30.6 cm/s

D 3016 cm/s

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Q 101

Half-life is measured by

A

spectroscopic method

B

Geiger muller counter

C

carbon dating

D

all of these

100

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Q 102

If mass and speed both are doubled kinetic energy will

A

increases 4 times

B

increases 6 times

C

increases 8 times

D

increases 10 times

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Q 103

The units of Wien's constant is _____

A

m.k

B

m/k

C

k/m

D

none of these

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Q 104

Dual nature of light is proved by :

A

Davissom and German's experiment

B

Black body radiation

C

Compton 's effect

D

Photoelectric effect

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Q 105

A stationary source of sound produce wave of wavelength L and speed v . Now, the source moves away from the observer. What is the wavelength and speed of the sound as measured by the observer?

A wavelength decreases speed does not change

B wavelength increases speed does not change

C wavelength increases speed increases

D wavelength increases speed decreases

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Q 106

Quarks are _____ spin particles

A

full

B

half

C

quarter

D

none of these

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Q 107

Two pulses move in opposite directions on a string and are identical in shape except that one has positive displacements of the elements of the string and the other has negative displacements. At the moment the two pulses completely overlap on the string, what happens?

A the energy associated with the pulses has disappeared

B the string does not move afterwards

C the string forms a straight line for a moment

D pulses vanished and will not appear again

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Q 108

A metal rod of length 4 m , velocity 5m/s and magnetic field 0.5 T induced emf is

A

10 V

B

20V

C

30V

D

4V

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Q 110

Ripple factor of half wave rectifier is

A

1.21

B

0.8

C

0.6

D

0.4

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Q 110

Ripple factor of half wave rectifier is

A

1.21

B

0.8

C

0.6

D

0.4

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Q 111

In half wave rectification, the output DC voltage is obtained across the load for

A

the positive half cycle of input AC

B

the negative half cycle of input AC

C

the positive and negative half cycles of input AC

D

Either positive or negative half cycle of input AC

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Q 112

C^{14} decays with a half life of about 5800 years. In a sample of bone the ratio of C^{14} to C^{12} is found to be $1/4$ th of what it is in free air. This bone may belong to a period about X centuries ago, where X is nearest to:

A 2×58

B 58

C $58/2$ D 3×58

111

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 113

The angular acceleration becomes four times when

A

 $\alpha=2, r=2$

B

 $\alpha=4, r=4$

C

 $\alpha=3, r=0$

D

 $r=0, \alpha=0$

112

SKIPPED QUESTIONS 

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Q 114

In which situation, distance is three times than its displacement?

A

object moves and come back to its initial position

B

object moves 20 m towards east and 10 m towards west

C

object moves 20 m towards east and 10 m towards south

D

object moves 20 m towards north and 10 m towards west

113

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Q 115

A proton has mass m and charge q . It is suspended in electric and gravitational field. What is the magnitude of electric field?

A

$$E = m \cdot g / q$$

B

$$E = m \cdot g / q \cdot v$$

C

$$E = m \cdot g / q \cdot v \cdot B$$

D

$$E = q / m \cdot g$$

114

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 116

Calculate the charge passing through the circuit if it's current is 10 Amp and the recorded time is 15 seconds

A 1500 Coulomb

B 150 Coulomb

C 13400 Coulomb

D 140 Coulomb

115

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Q 117

A reversible carnot engine converts $\frac{1}{6}$ th of heat into input work. When the temperature of sink is reduced by 62 degree C then efficiency is doubled then temperature of source and sink is

A 80 C ,37 C

B 99 C , 30C

C 99C ,25C

D 99C , 37C

116

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Q 118 What is the de Broglie wavelength associated with an electron, accelerated through a potential difference of 200 volts?

A 1nm

B 0.5nm

C 0.0056 nm

D 0.086 nm

117

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Q 119

The unstable atom means

A

electrons are increasing

B

protons are increasing

C

neutrons are increasing

D

any of these

118

SKIPPED QUESTIONS 

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Q 120

Value of current in a short circuit is _____

A

Infinite

B

zero

C

minimum

D

maximum

119

SKIPPED QUESTIONS 

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Q 121

The shortest distance between two points on a travelling wave that have a phase difference of $(\pi/3)$ is 5 cm. If the wave has frequency 500 Hz, what is the speed of the wave?

A 300 m/s

B 150 m/s

C 300 cm/s

D 150 cm/s

120

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 122

An ideal gas at 15.5°C and a pressure of 1.72×10^5 Pa occupies a volume of 2.81 m³. How many moles of gas are present?

A 2.01 mol

B 21 mol

C 201 mol

D 2001 mol

121

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Q 123

A monochromatic light is incident on two slits and interference pattern is produced on screen at the distance L . Now one slit is covered, no light coming from it. What is the change in pattern on the screen?

- A the width of central maximum is decreased
- B the width of outer maximum is decreased
- C the intensity of central maximum will increase
- D less number of fringes will be observed

122

SKIPPED QUESTIONS 

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Q 124

A body at temperature T radiates heat according to relation

A

 T^{-2}

B

 T^4

C

 T^{-4}

D

none of these

123

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 125

Energy released when one mole of an ionic crystal is formed is

A

Activation energy

B

Potential energy

C

Energy of formation

D

Lattice Energy

124

SKIPPED QUESTIONS 

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Next Question >

Q 126

Any specie which carry a positive charge and can accept electrons is called as _____?

A

Electrophile

B

Anion

C

Nucleophile

D

Electrophobic

125

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 127

According to vital force theory organic compounds were only produce in _____?

A Animals

B Plants

C Bacteria

D All of these

126

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Next Question 

Q 128

Glycerol can also be termed as

A

1 - butanol

B

1, 2, 3 - propanetriol

C

2 - methyl - propanol

D

ISObutyl alcohol

127

SKIPPED QUESTIONS 

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Next Question 

Q 129

Following are example of Intramolecular forces except?

A

Ionic bond

B

Covalent bond

C

Metallic bond

D

Dipole Dipole forces

128

SKIPPED QUESTIONS 

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Q 130

Amino acids in proteins are held together by:

A

Peptide bond

B

Phosphodiester linkage

C

H-bonding

D

Ether linkage

129

SKIPPED QUESTIONS 

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Next Question 

Q 131 Reaction of carboxylic acids with base is a _____ reaction ?

A Neutralization

B Esterification

C Oxidation

D All of these

130

SKIPPED QUESTIONS 

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Next Question 

Q 132

What is the nature of Carbon present in Aldehyde is?

A

Nucleophilic

B

Electrophilic

C

Neutral

D

all of these

131

SKIPPED QUESTIONS 

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Next Question 

Q 133

Two compartments of a galvanic cell are connected by

A

A battery

B

Electrical Wires

C

A pipe

D

Salt Bridge

132

SKIPPED QUESTIONS 

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Next Question 

Q 134 Enthalpy change of solution of Na_2CO_3 is a _____ reaction?

A Exothermic reaction

B Endothermic reaction

C Spontaneous reaction

D nonspontaneous reaction

133

SKIPPED QUESTIONS 

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Next Question 

Q 135

How many pi bonds are present in ethene?

A

3

B

2

C

1

D

0

134

SKIPPED QUESTIONS 

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Next Question 

Q 136 The density of liquids are _than gases but _____to solids

A lesser, closer

B greate, closer

C smaller, greater

D lesser, greater

135

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 137

Which of the following shows Planck's quantum theory

A

$$E=h\nu$$

B

$$E=c/\nu$$

C

$$E = c\nu$$

D

none of these

136

SKIPPED QUESTIONS 

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Q 138

Total no. of electrons present in 48 g Mg^{2+} are

A

24NA

B

2NA

C

20NA

D

1 NA

137

SKIPPED QUESTIONS 

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Next Question 

Q 139

The solubility of alcohols is due to

A

dipole moment

B

covalent bonds

C

hydrogen bonding

D

electronegativity

138

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Next Question 

Q 140

Decrease in Oxidation number is

A

Oxidation

B

Reduction

C

Both A and B

D

None of these

139

SKIPPED QUESTIONS 

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Next Question 

Q 141

The density of an ideal gas falls as its temperature ____ and pressure _____

A decrease, increase

B increase, decrease

C falls, Constant

D constant, constant

140

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 142

Reduction of ketones produce_____?

A

Aldehydes

B

Methanol

C

Primary alcohols

D

Secondary alcohols

141

SKIPPED QUESTIONS 

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Next Question 

Q 143 Which of the following Shows tautomerism?

A Amino acids

B Ketones

C Carboxylic acids

D All of these

142

SKIPPED QUESTIONS 

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Next Question 

Q 144

The half-life for first order reaction is independent of initial

A

temperature

B

pressure

C

concentration

D

all of these

143

SKIPPED QUESTIONS 

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Next Question 

Q 145

Glucose is converted into ethanol by the _____ enzyme present in yeast.

A

Invertase

B

Urease

C

Glycolysis

D

Zymase

144

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 146

Which of the following reaction takes place when alkyl halide react with KOH in water ?

A Substitution reaction

B Elimination reaction

C Addition reaction

D None of these

145

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Next Question 

Q 147

Conversion of straight chain hydrocarbons into branched chain is called as _____?

A

Reforming

B

Cracking

C

Isomers

D

Decomposition

146

SKIPPED QUESTIONS 

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Next Question 

Q 148

Atoms arranged in regular and repeating manner is the characteristic of

A

ionic solids

B

molecular solids

C

crystalline solids

D

covalent solids

147

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Q 149

In the reaction of NaBH_4 with aldehyde and ketones, which of the following act as Nucleophile?

A

 B^-

B

 H^-

C

 BH_2^-

D

 NaBH_3^-

148

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Q 150

The value of Principal quantum number is _integers up to infinity

A

zero, positive

B

non zero, positive

C

non zero, negative

D

positive

149

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Q 151

How enthalpy changes of reactions can be measured?

A

By spectrometry

B

By conductometry

C

By calorimetry

D

By refractometry

150

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Next Question 

Q 152

Those elements ,with electronic configuration of valence shell ns^2np^6 show little tendency to react chemically, are called

A lanthanides

B Actinides

C Alkali metals

D Noble gases

151

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Q 153

Solidified Noble gases contains

A

Polar molecules

B

Polar atoms

C

Non Polar atoms

D

None of these

152

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Next Question 

Q 154

The deliquescence is a property in which a solid

A

Absorbs moisture and remains solid

B

Absorbs moisture and turns to liquid form

C

Loses water of crystallization

D

Increases the number of water of crystallization

153

SKIPPED QUESTIONS 

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Next Question 

Q 155

Type of reactants or product decides the nature of method adapted for finding

A

Rate constant

B

Enthalpy

C

Temperature

D

Rate of a Reaction

154

SKIPPED QUESTIONS 

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Next Question 

Q 156 Protein is a polymer of _____?

A Nitrogen atoms

B Amino acids

C Glucose

D Nitrogenous base

155

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Next Question 

Q 157

Which of the following acid is used a coagulant for latex in the rubber industry ?

A

Acetic acid

B

Butyric acid

C

Propanoic acid

D

All of these

156

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 158 In benzene, carboxylic acids exist as_____?

A Polymers

B Dimers

C Individually

D Trimers

157

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Next Question 

Q 159

There are very strong attractive forces due to close packing in _-

A solids

B liquids

C gases

D all of these

158

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Q 160

How meta directing groups affect the Electrophilic substitution of benzene ring?

A Increase electron density at ortho,para position

B Decrease electron density at ortho and para positions

C Make benzene less reactive

D Both b and c

159

SKIPPED QUESTIONS 

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Next Question 

Q 161

The imaginary surface separating system and surroundings is called

A

Buffer

B

Transition Zone

C

Boundary

D

Intermediate state

160

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Q 162

Which of the following law explains that net heat change in a reaction is same whether it takes place through two or more different ways?

A Born Haber cycle

B Joule's principle

C Hess's law

D Law of conservation of energy

161

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 163

What is the general formula of Aldehyde?

A

RCOR

B

RCOOR

C

RCHO

D

RCOOH

162

SKIPPED QUESTIONS 

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Next Question 

Q 164

Most abundant protein in animals forming 25%-35% of body protein is which type of protein?

A Simple proteins

B Conjugated proteins

C Derived proteins

D None

163

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Q 165

Greater heat of vapourization of water is due to the presence of which forces?

A

H-bonding

B

Dipole Dipole forces

C

Polar covalent bond

D

All of these

164

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Q 166

If anyone of the products concentration is plotted against time instead of reactants the curve obtained will be

A Parabolic

B Rising

C Falling

D Elliptical

165

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Q 167

The order of size of 's' orbital is as follows

A

 $\dots 4s < 3s < 2s < 1s$

B

 $\dots 4s > 3s > 2s > 1s$

C

constant

D

none of these

166

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Q 168

What is the value of One calorie in joule ?

A

4.98J

B

7.98J

C

4.18J

D

8.21J

167

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 169 Ethane and hexane both are nonpolar molecules, but ethane has lower Boiling point than Hexane due to?

A Strong london forces in ethane due to smaller size

B Weak london forces in hexane due to larger size

C Strong london forces in hexane due to smaller size

D Strong london forces in hexane due to larger size

168

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Q 170

Which of the following is formed during S_N1 reactions?

A

Secondary carbocation

B

Primary carbocation

C

Tertiary carbocation

D

Methyl carbocation

169

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Q 171

What are the basic particles of ice crystals

A

atoms

B

anions

C

cations

D

molecules

170

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Next Question 

Q 172

Alkenes show geometrical isomerism due to:

A

Resonance

B

Asymmetry

C

Rotation around single bond

D

Restricted rotation around a double bond

171

SKIPPED QUESTIONS 

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Next Question 

Q 173

Calcium carbide is prepared by heating lime with coke at

A 25 °C

B 26 °C

C 27 °C

D 28 °C

172

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Next Question 

Q 174 Most of the enzyme reactions are_____?

A Reversible

B Irreversible

C Condensation

D Oxidation

173

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Next Question 

Q 175

Total number of neutron in 5g of D₂O (D is H)

A

.25 NA

B

1.1 NA

C

2.5 NA

D

.5 NA

174

SKIPPED QUESTIONS 

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Q 176

The only thing which can predict that reaction will be spontaneous or nonspontaneous is

A

Enthalpy Change

B

Free Energy of the system

C

Energy Change

D

Temperature Change

175

SKIPPED QUESTIONS 

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Next Question 

Q 177

In Electrolysis of NaNO_3 , Na + is

A

Discharged at anode

B

Discharge at cathode

C

Do Not discharge

D

None of these

176

SKIPPED QUESTIONS 

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Next Question 

Q 178 The tendency of atoms to attain a maximum of ____ electron in the valence shell is called octet rule

A 6

B 16

C 8

D 18

177

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Next Question 

Q 179

Which of the following test can detect presence of both Aldehydes and ketones ?

A

Tollen's test

B

Reaction with hydrazine

C

Reaction with 2,4-dinitrophenylhydrazine

D

Reaction with Ammonia

178

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Q 180 the crude petroleum is separated in fraction by

A filtration

B fractional distillation

C steam distillation

D fractional sublimation

179

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 181 Choose the correct sentence.

A Huda watched the news on the BBC.

B Huda watched the news on the BBC?

C Huda watched the news on the bbc.

D Huda, watched the news, on the BBC.

180

SKIPPED QUESTIONS 

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Next Question 

Comprehend key vocabulary

Q 182

keen

A

thin

B

sharp

C

broken

D

fluffy

181

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 183

Choose the correct spelling of the word

A

something

B

somthing

C

sumthing

D

sumthin

182

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate control of tenses and sentence structure

Q 184

Did I say anything to make you angry?

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

183

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate correct use of articles and prepositions

Q 185

_____ ink in my pen is red.

A

A

B

An

C

The

D

No article

184

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate control of tenses and sentence structure

Q 186

The sun _____ in the west.

A

rise

B

rises

C

rose

D

risen

185

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Demonstrate control of tenses and sentence structure

Q 187 We _____ (laugh) at the funny clowns.

A laugh

B laughs

C laughing

D laughed

186

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Next Question 

Comprehend key vocabulary

Q 188

Asif tried to stop the car but the _____ did not work and he hit a pole.

A

brakes

B

crossroads

C

tires

D

controls

187

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of articles and prepositions

Q 189

Here is _____ photograph you were searching for.

A

a

B

an

C

the

D

no article

188

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Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 190

Choose the correct sentence.

A The class will begin, next Tuesday 6th September; at 6 p.m.

B The class will begin next Tuesday 6th September at 6 p.m.!

C The class will begin next Tuesday, 6th September. at 6 p.m.

D The class will begin next Tuesday, 6th September, at 6 p.m.

189

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of subject-verb agreement

Q 191 Much _____ been said in the news reports.

A were

B have

C has

D was

190

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Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 192 Even if the doctor (A)/ put in his best efforts, he (B)/ could not succeed in (C)/ saving the patient. (D)

A Even if the doctor

B put in his best efforts, he

C could not succeed in

D saving the patient.

191

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of subject-verb agreement

Q 193 The company _____ of its stakeholders.

A think

B thought

C thinks

D thinking

192

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Next Question 

Demonstrate control of tenses and sentence structure

Q 194

My mother makes delicious cookies.

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

193

SKIPPED QUESTIONS 

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Next Question 

Comprehend key vocabulary

Q 195

The cat _____ silently towards the bird.

A

creep

B

crept

C

crawled

D

tip-toed

194

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Next Question 

Demonstrate control of tenses and sentence structure

Q 196 She _____ (mop) the floor when her cousin came in. She scolded him angrily because he made the floor dirty with his muddy shoes.

A mopped

B was mopping

C mops

D is mopping

195

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 197

Choose the correct spelling of the word

A

aniversary

B

anniversery

C

anniversary

D

aniversry

196

SKIPPED QUESTIONS 

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Next Question 

Demonstrate control of tenses and sentence structure

Q 198

This summer our vacation should be both exciting and restful.

A

complex

B

simple

C

compound

D

compound-complex

197

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of articles and prepositions

Q 199 Who is _____ lady in _____ picture?

A the... an

B a.. the

C the... a

D the... the

198

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Comprehend key vocabulary

Q 200

You _____ to have good manners.

A might

B should

C ought

D may

199

SKIPPED QUESTIONS 

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Next Question 

Complete the series

Q 201

Which one of the following have four sides

A

triangle

B

square

C

circle

D

right triangle

200

SKIPPED QUESTIONS 

 Previous Question

Next Question 

Verbal reasoning

Q 202

Statements (I) The childrens are being aggressive today. (II) There is no specific limit for childrens to use mobile screens

- A Statement 1 is the cause and 2 is the effect
- B both of the statements 1 and 2 are independent.
- C Statement 2 is the cause and 1 is the effect
- D Both statements 1 and 2 are effects of some common cause

201

SKIPPED QUESTIONS 

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Next Question 

Essential parts

Q 203

A culture cannot exist without?

A

Knowledge

B

Customs

C

People

D

Faith

202

SKIPPED QUESTIONS 

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Next Question 

Number series

Q 204

Look at this series 14, 28, 20, 40, 32, 64. What number should come next?

A 52

B 56

C 96

D 128

203

SKIPPED QUESTIONS 

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Next Question 

Identify the number that follows the series.

Q 205

Look at this series: 53, 53, 40, 40, 27, 27, ... What number should come next?

A 12

B 14

C 27

D 53

204

SKIPPED QUESTIONS 

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Next Question 

Statements and Actions

Q 206

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A Both of them follows

B None of them follows

C Only I follows

D Only II follows

205

SKIPPED QUESTIONS 

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Next Question >

Statements and Actions

Q 207

Statement The Management of School M has decided to give free breakfast from next academic year to all the students in its primary section through its canteen even though they will not get any government grant. Courses of Action (I) The school will have to admit many poor students who will seek admission for the next academic year. (II) The canteen facilities and utensils have to be checked and new purchases to be made to equip it properly. (III) Funds will have to be raised to support the scheme for years to come.

A Only II and III follows

B Only III and I follow

C Only I and II follow

D Only I follows

206

SKIPPED QUESTIONS ^

Complete the series

Q 208

Complete the series A25, B625, C15625, _____?

A

D390625

B

D364748

C

D390524

D

D390525

207

SKIPPED QUESTIONS 

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Next Question 

Dependent Causes/ Independent Causes/

Q 209

Statement: Most of the steel producing companies in the country have made considerable profit during the last financial year. Many Asian countries have been importing huge quantities of steel from Pakistan

- A Statement I is the cause and statement II is its effect.
- B Statement II is the cause and statement I is its effect
- C Both the statements I and II are independent causes
- D Both the statements I and II are effects of some common cause

208

SKIPPED QUESTIONS 

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Next Question 

Artificial Language

Q 210

What will be the meaning of 'walkaway'? If mignelasan means cupboard Lasanpoen means boardwalk
Cuopdansa means Pullman1

A

Lasandansa

B

Poeinmigen

C

Poenforec

D

Cuopisel

209

SKIPPED QUESTIONS 

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Submit

Q1 Force acting on a positive charge is always:.....

A in the direction opposite to electric field

B in the direction of electric field

C in the direction perpendicular to electric field

D in the direction perpendicular to the velocity of charge

< Previous Question

Next Question >

Q2 The attraction between water molecules is termed as:

A cohesion

B tension

C adhesion

D imbibition

< Previous Question

Next Question >

Q3

What is the color of Xanthophyll pigment?

A

Yellow

B

Red

C

Orange

D

Green

< Previous Question

Next Question >

Q4

The substrate concentration that produces exactly half of the maximum reaction rate can be described by?

A

Michaelis equation

B

Menten equation

C

Bernoulli equation

D

Michaelis-Menten equation

[< Previous Question](#)[Next Question >](#)

Q5 The function of spleen is to filter ---

A Blood

B Lymph

C Semen

D Amniotic fluid

< Previous Question

Next Question >

Q6 Which of the following system is well-developed in acoelomates?

A excretory

B nervous

C transport

D both a and b

< Previous Question

Next Question >

Q7 The type of plastids found in roots of plants _____ .

A Chloroplasts

B Chromoplasts

C Leucoplasts

D All of them

< Previous Question

Next Question >

Q8 Which of the following molecules is reduced?

A NAD⁺

B FAD

C O₂

D NADPH

< Previous Question

Next Question >

Q9 Roots of a plant show which of the following?

A Positive phototropism and negative geotropism

B Negative tactic movement and positive tropic movement

C Positive geotropism of stem and roots

D Negative phototropism and positive geotropism

< Previous Question

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Q10

Phagocytosis is a form of _____. During phagocytosis, the cell membrane folds inwards in the form of a vacuole to engulf solid particles.

A

Pinocytosis

B

Exocytosis

C

Endocytosis

D

Erythrocytosis

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Q11 A neuron located in the central nervous system that projects its axon outside the CNS is called:

A Motor nerve

B sensory nerve

C Both A and B

D Mixed nerve

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Q12

Pilli hollow appendages in bacteria are basically functions in

A

mortality

B

conjugation

C

chemical detection

D

None of above

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Q13

Which of these transports sperm from the testis to the penis?

A

sperm duct

B

scrotum

C

urethra

D

gamete

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Q14

Haemolymph is present in:

A

Amphibians

B

Reptiles

C

Fish

D

None of the above.

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Q15 A reflex action involving two or more interneurons between sensory and motor motor neuron is called:

A Monosynaptic reflex

B Polysynaptic reflex

C Hemi Synaptic reflex

D None of these

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Q16 A gene pool is disturbed by which of the following?

- A Emigration
- B immigration
- C pan migration
- D both a and b

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Q17

Filial is a Latin word. It means which of the following?

A

spring

B

issue

C

progeny

D

none of these

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Q18

Choose the function irrelevant to oral cavity:

A

Grinding

B

Lubrication

C

Absorption

D

Digestion

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Q19

Which one of the following biomolecules is most abundant in animals?

A

Starch

B

glycogen

C

cellulose

D

both a and b

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Q20 HIV AIDS is caused by which viruses?

A human immunodeficiency virus

B retroviruses

C influenza Virus

D paramyxoviruses

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Q21

Which pigment protein is also known as muscle haemoglobin?

A

melanin

B

myoglobin

C

Rhodopsin

D

Lutein

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Q22 A point on a wheel has a constant angular velocity of 3 rad/s . The angle turned through in 15 seconds is:

A 45 rad

B $10\pi \text{ rad}$

C $90\pi \text{ rad}$

D 5 rad

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Q23

Where does the AIDS virus infect?

A

RBCs

B

WBCs

C

Leukocytes

D

none

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Q24

Biological molecules which catalyze a biochemical reaction and remain unchanged after completion of reaction are called?

A cofactor

B coenzymes

C activator

D enzymes

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Q25

Which of following system is segmentally arranged in annelids?

A

excretory system

B

digestive system

C

circulatory system

D

nervous system

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Q26

What is the approximate value of the active membrane potential?

A

0.07V

B

-50 mv

C

0.05 V

D

both a and b

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Q27

Which viruses can convert normal cells into cancer cells?

A

retrovirus

B

adenovirus

C

Poliovirus

D

All

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Q28

The male gonads are known as?

A

testes

B

testosterone

C

ovaries

D

ovum

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Q29

The functional group that best represents ketoses is?

A

CO

B

COOH

C

HCOH

D

HOH

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Q30 Analogous structures produced as a result of

A convergent evolution

B divergent evolution

C Natural selecting

D common ancestry

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Q31

Haemoglobin in man increases the oxygen carrying capacity of the blood to about

A

50 times

B

65 times

C

70 times

D

75 times

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Q32

Calcium, during muscle contraction binds with:

A

tropomyosin

B

Troponin C

C

Troponin I

D

Troponin T

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Q33 The skeleton of the sponges is in the form of variously shaped needle like structures called?

A Stipules

B Brails

C Spines

D Spicules

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Q34

In enzyme catalytic reaction the substrate is first converted to a high energy state called?

A

transition state

B

high energy state

C

activation state

D

breaking point

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Q35

Photosystem 2 absorbs maximum wavelength of light?

A

750

B

650

C

680

D

670

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Q36 Which type of evolution is represented by analogous organs?

A Divergent evolution

B Straight evolution

C Zig-zag evolution

D Convergent evolution

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Q37

Cell membrane is chemically composed of lipids and which of the following?

A

protein

B

carbohydrates

C

both a and b

D

none of these

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Q38

Which of the statement about cell membrane is not true?

A

It contains protein molecules embedded in lipid bilayer

B

It is a differentially permeable membrane

C

It contains charged pores thus ions being charged particles across cell membrane much easier than neutral particles.

D

It may get infolded to engulf solid or liquid material

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Q39

The brain portion that is reduced in humans is:

A

Forebrain

B

Midbrain

C

Hindbrain

D

Limbic system

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Q40

A structure which is located between the nucleocapsid and the envelope

A

capsid

B

matrix protein

C

envelop

D

nucleo capsid

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Q41 The radiations most important to life are called?

A UV light

B Visible light

C both a and b

D none of these

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Q42

Which of the following organelles are found in both plant and animal cells?

A central vacuole

B tonoplast

C cell wall

D peroxisomes

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Q43

Which of these lobes contains Broca's area, which is associated with speech ability?

A

Frontal

B

Parietal

C

Temporal

D

Occipital

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Q44 A pure breeding tall pea plant was crossed to dwarf plant what will be the frequency of dwarf plants in F1?

A 0.25

B 0.5

C 0

D 1

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Q45

The nasal cavity opens outside of the kind of openings that are known as

A

pharynx

B

bronchioles

C

Nostrils

D

None of these

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Q46

The respiratory chain electron carrier that directly binds oxygen is ____

A Cytochrome a

B cytochrome a3

C cytochrome c1

D cytochrome b

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Q47 Enzymes which are involved in transfer of electrons are known as?

- A oxidases
- B dehydrogenases
- C hydrolyses
- D both a and b

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Q48 Which is not an example of transmembrane transport between different subcellular compartments?

- A Transport from the stroma into thylakoid space
- B Transport from the cytoplasm into the lumen of the endoplasmic reticulum
- C Transport from mitochondrial intermembrane space into the mitochondrial matrix
- D Transport from the endoplasmic reticulum into the Golgi complex

Q49 Which cells produce oogonia in ovary?

A Stromal cells

B Epithelial cells

C Germ cells

D theca cells

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Q50

All of the following are characteristics of prokaryotic cells except for?

A

unicellularity

B

lack of membrane-bound organelle

C

lack of a nucleus

D

they are usually found in protists and fungi

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Q51

Enzyme that are integral part of ribosomes are involved in the synthesis of which of the following molecules?

A

lipids

B

proteins

C

carbohydrates

D

all of these

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Q52

Which is not the characteristic of triploblastic?

A

They may be coelomate pseudocoelomate or acoelomate

B

They are included in grade bilateria

C

All of them have a digestive system

D

All of them have blood vascular system

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Q53

The Urey-Miller experiment determined which of the following results?

A

DNA replicates by semiconservative replication

B

Cyanobacteria were responsible for the oxygenation of the atmosphere

C

The early atmosphere was composed of ammonia and methane

D

Organic molecules can arise from inorganic precursors

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Q54

How are flat worms not similar to round worms?

A

They are both acoelomates.

B

They are both triploblastic.

C

They both show bilateral symmetry.

D

They are both worms.

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Q55 Where does the human body store spermatozoa?

A Ejaculatory duct

B Seminal vesicle

C Seminiferous tubules

D Epididymis

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Q56 Which of the following statements explains why viruses are only able to multiply in living cells?

A binary fission is controlled by host cell genes.

B Virus do not possess the necessary components for self-replication.

C DNA is only able to replicate inside living cells

D They have only enough genetic information for DNA replication

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Q57

Choose a correct statement among following.

A

spinal reflexes has 4 elements

B

lower motor neurons has cell body in anterior column of grey matter

C

grey matter that lies transversely is lateral commissure

D

spinal cord has 3 equal parts

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Q58 Which of the following is not an example of positive feedback?

- A A forest fire slowly expands outward, which provides it with even more fuel to burn.
- B During childbirth, oxytocin creates a stimulus which causes the hypothalamus to release more oxytocin
- C As more buffalo begin to run in a herd, the overall level of panic increases. This results in even more buffalo running.
- D As blood calcium levels increase, parathyroid hormone (PTH) is reduced.

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Q59

The stomata are closed at which of the following temperature? (In centigrade)

A

45

B

35

C

15

D

25

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Q60

A mother with blood type A and the genotype "A/O" and a father with blood type B and genotype "B/B" have a child with blood type AB. This is an example of what type of inheritance pattern?

- A Incomplete dominance
- B X-linked autosomal dominance
- C Complete autosomal dominance
- D Codominance

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Q61 Which type of light causes the highest rate of photosynthesis?

A blue

B red

C orange

D violet

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Q62

Fatty acids release considerable amount of energy in oxidation and ____

A

calvin cycle

B

Kreb's cycle

C

dark reaction

D

light reactions

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Q63

An activated enzyme consisting of the polypeptide chain and co-factors is known as which of the following?

A apoenzyme

B holoenzyme

C coenzyme

D prosthetic group

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Q64

The long unbranched, slender tubulin protein is called?

A

microtubules

B

intermediate filament

C

actin

D

all of these

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Q65

If the line frequency is 50 Hz, the output frequency of bridge rectifier is

A

50Hz

B

100Hz

C

200Hz

D

150Hz

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Q66

Two travelling waves of the same frequency, same amplitude and travelling in opposite direction results in:

A

beats

B

standing waves

C

diffraction

D

none of these

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Q67

Unit of instantaneous velocity is

A

 m/s^2

B

 m/s

C

m

D

 $1/\text{s}$

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Q68

Which among the following shows the particle nature of light?

A

Interference

B

Reflection

C

polarization

D

Photoelectric effect

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Q69 An electrical instrument which is used to measure potential difference between two points is called

A Barometer

B Manometer

C Galvanometer

D Voltmeter

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Q70

The nucleus is made up of more neutrons than protons

A

H

B

O

C

U

D

none of these

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Q71

Temperature is defined by

A

first law of thermodynamics

B

Zeroth law of thermodynamics

C

Second law of thermodynamics

D

Third law of thermodynamics

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Q72

The negative sign in $F = -kx$, indicates that:

A

F is directed opposite to x

B

F is directed along x

C

F is always equal to x

D

none of these

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Q73

The distance between two point charges is halved, the force between them would be:....

A

half

B

double

C

one fourth

D

four times

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Q74

The number of diodes in bridge rectifier is

A

4

B

3

C

2

D

5

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Q75

Which of the following has a negative temperature coefficient of resistance ?

A

Tungsten

B

Carbon

C

Nichrome

D

Platinum

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Q76 Passengers sitting in a stationary car experience a jerk when the car suddenly starts. This is due to

A inertia of motion

B inertia of rest

C inertia of turning

D inertia of acceleration

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Q77

The magnetic flux linked with a coil is inversely proportional to the

A

Area of cross section

B

Number of turns

C

magnetic field

D

none of these

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Q78 When the antinodes are all at their extreme displacements,

A the energy stored is wholly kinetic

B the energy stored is wholly potential

C the energy stored is kinetic and potential

D the energy stored is wholly chemical

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Q79

Displacement is a

A

tensor

B

vector

C

scalar

D

None of these

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Q80 Half life of radioactive nuclide is 20 hours. What fraction of original activity will remain after 40 hours?

A $1/2$

B 2

C 4

D $1/4$

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Q81 Which of the following is the unit of mutual inductance?

A VsA^{-2}

B V^3sA^2

C $V^2 s$

D VsA^{-1}

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Q82 A bullet fired from gun can pierce to a target due to

A heat energy

B mechanical energy

C acceleration

D kinetic energy

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Q83

Galilean transformations are applicable in :

A

All frames

B

frame of reference

C

Non-Inertial frame

D

Inertial frame

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Q84 Terminal potential difference of a cell

A increases with increase in its internal resistance

B decrease with increase in internal resistance

C is independent of its internal resistance

D None of these

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Q85

A fixed mass of gas undergoes isochoric (isovolumetric) change. As a result the pressure of the gas has increased. Which of the following is true about the gas?

A internal energy = decrease direction of transfer of thermal energy = released from the gas

B internal energy = decrease direction of transfer of thermal energy = absorbed by the gas

C internal energy = increase direction of transfer of thermal energy = released from the gas

D internal energy = increase direction of transfer of thermal energy = absorbed by the gas

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Q86

The wavelength of x-ray is measured by ____

A

diffraction

B

interference

C

reflection

D

all of these

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Q87 Specific latent heat of fusion of ice is 334 J/g. How much energy is needed to melt 2 kg of ice at 0°C.

A 6.68×10^5 J

B 6.68×10^5 kJ

C 668 J

D 668 kJ

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Q88

Calculate the maximum emf when the velocity is 10m/s, the length is 3m and the magnetic field density is 5T

A

150V

B

300V

C

100V

D

0V

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Q89

Which equation represents the maximum output power

A

$$P = VI$$

B

$$P = I^2 R$$

C

$$P = V^2/R$$

D

all of these

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Q90

Magnetic field will not produce in case of

A

charged positive particles

B

charged negative particles

C

neutral particles

D

All of these

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Q91 The effect of nuclear bomb radiation lasts for

A few minutes

B few weeks

C few days

D more than 90 Years

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Q92

Determine the linear velocity of a point rotating at an angular velocity of 12π radians per second at a distance of 8 centimeters from the center of the rotating object.

A 31.6 cm/s

B 301.6 cm/s

C 30.6 cm/s

D 3016 cm/s

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Q93

Half-life is measured by

A

spectroscopic method

B

Geiger muller counter

C

carbon dating

D

all of these

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Q94

If mass and speed both are doubled kinetic energy will

A

increases 4 times

B

increases 6 times

C

increases 8 times

D

increases 10 times

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Q95

Dual nature of light is proved by :

A

Davisson and German's experiment

B

Black body radiation

C

Compton 's effect

D

Photoelectric effect

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Q96

A stationary source of sound produce wave of wavelength L and speed v . Now, the source moves away from the observer. What is the wavelength and speed of the sound as measured by the observer?

A wavelength decreases speed does not change

B wavelength increases speed does not change

C wavelength increases speed increases

D wavelength increases speed decreases

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Q97

Quarks are _____ spin particles

A

full

B

half

C

quarter

D

none of these

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Q98

Two pulses move in opposite directions on a string and are identical in shape except that one has positive displacements of the elements of the string and the other has negative displacements. At the moment the two pulses completely overlap on the string, what happens?

A

the energy associated with the pulses has disappeared

B

the string does not move afterwards

C

the string forms a straight line for a moment

D

pulses vanished and will not appear again

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Q99

A metal rod of length 4 m , velocity 5m/s and magnetic field 0.5 T induced emf is

A

10 V

B

20V

C

30V

D

4V

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Q100

Ripple factor of half wave rectifier is

A

1.21

B

0.8

C

0.6

D

0.4

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Q101

In half wave rectification, the output DC voltage is obtained across the load for

- A the positive half cycle of input AC
- B the negative half cycle of input AC
- C the positive and negative half cycles of input AC
- D Either positive or negative half cycle of input AC

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Q102

C^{14} decays with a half life of about 5800 years. In a sample of bone the ratio of C^{14} to C^{12} is found to be $1/4$ th of what it is in free air. This bone may belong to a period about X centuries ago, where X is nearest to:

A

 2×58

B

58

C

 $58/2$

D

 3×58

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Q103

The angular acceleration becomes four times when

A

 $\alpha=2, r=2$

B

 $\alpha=4, r=4$

C

 $\alpha=3, r=0$

D

 $r=0, \alpha=0$

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Q104

In which situation, distance is three times than its displacement?

A

object moves and come back to its initial position

B

object moves 20 m towards east and 10 m towards west

C

object moves 20 m towards east and 10 m towards south

D

object moves 20 m towards north and 10 m towards west

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Q105

A proton has mass m and charge q . It is suspended in electric and gravitational field. What is the magnitude of electric field?

A

$$E = m \cdot g / q$$

B

$$E = m \cdot g / q \cdot v$$

C

$$E = m \cdot g / q \cdot v \cdot B$$

D

$$E = q / m \cdot g$$

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Q106

A reversible carnot engine converts $\frac{1}{6}$ th of heat into input work. When the temperature of sink is reduced by 62 degree C then efficiency is doubled then temperature of source and sink is

A 80 C , 37 C

B 99 C , 30C

C 99C , 25C

D 99C , 37C

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Q107

What is the de Broglie wavelength associated with an electron, accelerated through a potential difference of 200 volts?

A 1nm

B 0.5nm

C 0.0056 nm

D 0.086 nm

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Q108

The unstable atom means

A

electrons are increasing

B

protons are increasing

C

neutrons are increasing

D

any of these

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Q109

Value of current in a short circuit is _____

A

Infinite

B

zero

C

minimum

D

maximum

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Q110

The shortest distance between two points on a travelling wave that have a phase difference of $(\pi/3)$ is 5 cm. If the wave has frequency 500 Hz, what is the speed of the wave?

A 300 m/s

B 150 m/s

C 300 cm/s

D 150 cm/s

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Q111

An ideal gas at 15.5°C and a pressure of 1.72×10^5 Pa occupies a volume of 2.81 m^3 . How many moles of gas are present?

A 2.01 mol

B 21 mol

C 201 mol

D 2001 mol

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Q112

A monochromatic light is incident on two slits and interference pattern is produced on screen at the distance L . Now one slit is covered, no light coming from it. What is the change in pattern on the screen?

- A the width of central maximum is decreased
- B the width of outer maximum is decreased
- C the intensity of central maximum will increase
- D less number of fringes will be observed

Q113

Energy released when one mole of an ionic crystal is formed is

A

Activation energy

B

Potential energy

C

Energy of formation

D

Lattice Energy

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Q114

Any specie which carry a positive charge and can accept electrons is called as_____?

A

Electrophile

B

Anion

C

Nucleophile

D

Electrophobic

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Q115

According to vital force theory organic compounds were only produce in_____?

A Animals

B Plants

C Bacteria

D All of these

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Q116

Glycerol can also be termed as

A

1 - butanol

B

1, 2, 3 - propanetriol

C

2 - methyl - propanol

D

ISObutyl alcohol

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Q117

Following are example of Intramolecular forces except?

A

Ionic bond

B

Covalent bond

C

Metallic bond

D

Dipole Dipole forces

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Q118

Amino acids in proteins are held together by:

A

Peptide bond

B

Phosphodiester linkage

C

H-bonding

D

Ether linkage

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Q119 Reaction of carboxylic acids with base is a _____ reaction ?

A Neutralization

B Esterification

C Oxidation

D All of these

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Q120

Two compartments of a galvanic cell are connected by

A

A battery

B

Electrical Wires

C

A pipe

D

Salt Bridge

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Q121 Enthalpy change of solution of Na_2CO_3 is a _____ reaction?

A Exothermic reaction

B Endothermic reaction

C Spontaneous reaction

D nonspontaneous reaction

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Q122

How many pi bonds are present in ethene?

A 3

B 2

C 1

D 0

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Q123

The density of liquids are _than gases but _____to solids

A lesser, closer

B greate,closer

C smaller, greater

D lesser, greater

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Q124

Which of the following shows Planck's quantum theory

A

$$E=h\nu$$

B

$$E=c/\nu$$

C

$$E = c\nu$$

D

none of these

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Q125

Total no. of electrons present in 48 g Mg^{2+} are

A

24NA

B

2NA

C

20NA

D

1 NA

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Q126

The solubility of alcohols is due to

A

dipole moment

B

covalent bonds

C

hydrogen bonding

D

electronegativity

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Q127

Decrease in Oxidation number is

A

Oxidation

B

Reduction

C

Both A and B

D

None of these

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Q128

Reduction of ketones produce_____?

A

Aldehydes

B

Methanol

C

Primary alcohols

D

Secondary alcohols

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Q129 Which of the following Shows tautomerism?

A Amino acids

B Ketones

C Carboxylic acids

D All of these

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Q130

The half-life for first order reaction is independent of initial

A temperature

B pressure

C concentration

D all of these

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Q131

Glucose is converted into ethanol by the _____ enzyme present in yeast.

A

Invertase

B

Urease

C

Glycolysis

D

Zymase

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Q132

Which of the following reaction takes place when alkyl halide react with KOH in water ?

A

Substitution reaction

B

Elimination reaction

C

Addition reaction

D

None of these

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Q133

Conversion of straight chain hydrocarbons into branched chain is called as _____?

A

Reforming

B

Cracking

C

Isomers

D

Decomposition

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Q134

Atoms arranged in regular and repeating manner is the characteristic of

A

ionic solids

B

molecular solids

C

crystalline solids

D

covalent solids

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Q135

The value of Principal quantum number is _integers up to infinity

A zero, positive

B non zero, positive

C non zero, negative

D positive

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Q136

How enthalpy changes of reactions can be measured?

A By spectrometry

B By conductometry

C By calorimetry

D By refractometry

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Q137

Those elements ,with electronic configuration of valence shell ns^2np^6 show little tendency to react chemically, are called

A lanthanides

B Actinides

C Alkali metals

D Noble gases

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Q138

Solidified Noble gases contains

A Polar molecules

B Polar atoms

C Non Polar atoms

D None of these

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Q139

The deliquescence is a property in which a solid

A

Absorbs moisture and remains solid

B

Absorbs moisture and turns to liquid form

C

Loses water of crystallization

D

Increases the number of water of crystallization

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Q140

Type of reactants or product decides the nature of method adapted for finding

A

Rate constant

B

Enthalpy

C

Temperature

D

Rate of a Reaction

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Q141 Protein is a polymer of _____?

A Nitrogen atoms

B Amino acids

C Glucose

D Nitrogenous base

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Q142 In benzene, carboxylic acids exist as_____?

A Polymers

B Dimers

C Individually

D Trimers

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Q143

There are very strong attractive forces due to close packing in _-

A

solids

B

liquids

C

gases

D

all of these

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Q144

How meta directing groups affect the Electrophilic substitution of benzene ring?

A Increase electron density at ortho,para position

B Decrease electron density at ortho and para positions

C Make benzene less reactive

D Both b and c

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Q145

The imaginary surface separating system and surroundings is called

A

Buffer

B

Transition Zone

C

Boundary

D

Intermediate state

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Q146

Which of the following law explains that net heat change in a reaction is same whether it takes place through two or more different ways?

A Born Haber cycle

B Joule's principle

C Hess's law

D Law of conservation of energy

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Q147

What is the general formula of Aldehyde?

A

 RCOR

B

 RCOOR

C

 RCHO

D

 RCOOH

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Q148

Most abundant protein in animals forming 25%-35% of body protein is which type of protein?

A

Simple proteins

B

Conjugated proteins

C

Derived proteins

D

None

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Q149

Greater heat of vapourization of water is due to the presence of which forces?

A

H-bonding

B

Dipole Dipole forces

C

Polar covalent bond

D

All of these

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Q150

The order of size of 's' orbital is as follows

A

... $4s < 3s < 2s < 1s$

B

... $4s > 3s > 2s > 1s$

C

constant

D

none of these

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Q151

What is the value of One calorie in joule ?

A

4.98J

B

7.98J

C

4.18J

D

8.21J

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Q152 Ethane and hexane both are nonpolar molecules, but ethane has lower Boiling point than Hexane due to?

A Strong london forces in ethane due to smaller size

B Weak london forces in hexane due to larger size

C Strong london forces in hexane due to smaller size

D Strong london forces in hexane due to larger size

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Q153

Which of the following is formed during S_N1 reactions?

A Secondary carbocation

B Primary carbocation

C Tertiary carbocation

D Methyl carbocation

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Q154

What are the basic particles of ice crystals

A

atoms

B

anions

C

cations

D

molecules

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Q155

Alkenes show geometrical isomerism due to:

A

Resonance

B

Asymmetry

C

Rotation around single bond

D

Restricted rotation around a double bond

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Q156

Calcium carbide is prepared by heating lime with coke at

A 25 °C

B 26 °C

C 27 °C

D 28 °C

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Q157

Total number of neutron in 5g of D₂O (D is H)

A

.25 NA

B

1.1 NA

C

2.5 NA

D

.5 NA

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Q158

The only thing which can predict that reaction will be spontaneous or nonspontaneous is

A Enthalpy Change

B Free Energy of the system

C Energy Change

D Temperature Change

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Q159

In Electrolysis of NaNO_3 , Na^+ is

A Discharged at anode

B Discharge at cathode

C Do Not discharge

D None of these

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Q160 The tendency of atoms to attain a maximum of ____ electron in the valence shell is called octet rule

A 6

B 16

C 8

D 18

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Q161

Which of the following test can detect presence of both Aldehydes and ketones ?

A

Tollen's test

B

Reaction with hydrazine

C

Reaction with 2,4-dinitrophenylhydrazine

D

Reaction with Ammonia

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Q162

the crude petroleum is separated in fraction by

A

filtration

B

fractional distillation

C

steam distillation

D

fractional sublimation

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Q163

Choose the correct sentence.

A

Huda watched the news on the BBC.

B

Huda watched the news on the BBC?

C

Huda watched the news on the bbc.

D

Huda, watched the news, on the BBC.

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Q164

Choose the correct spelling of the word

A

something

B

somthing

C

sumthing

D

sumthin

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Q165

Did I say anything to make you angry?

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

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Q166

_____ ink in my pen is red.

A

A

B

An

C

The

D

No article

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Q167

The sun _____ in the west.

A

rise

B

rises

C

rose

D

risen

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Q168

We _____ (laugh) at the funny clowns.

A

laugh

B

laughs

C

laughing

D

laughed

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Q169

Asif tried to stop the car but the _____ did not work and he hit a pole.

A

brakes

B

crossroads

C

tires

D

controls

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Q170

Here is _____ photograph you were searching for.

A

a

B

an

C

the

D

no article

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Q171 Choose the correct sentence.

A The class will begin, next Tuesday 6th September; at 6 p.m.

B The class will begin next Tuesday 6th September at 6 p.m.!

C The class will begin next Tuesday, 6th September. at 6 p.m.

D The class will begin next Tuesday, 6th September, at 6 p.m.

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Q172 Even if the doctor (A)/ put in his best efforts, he (B)/ could not succeed in (C)/ saving the patient. (D)

A Even if the doctor

B put in his best efforts, he

C could not succeed in

D saving the patient.

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Q173

The company _____ of its stakeholders.

A

think

B

thought

C

thinks

D

thinking

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Q174

My mother makes delicious cookies.

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

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Q175

The cat _____ silently towards the bird.

A

creep

B

crept

C

crawled

D

tip-toed

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Q176

She _____ (mop) the floor when her cousin came in. She scolded him angrily because he made the floor dirty with his muddy shoes.

A mopped

B was mopping

C mops

D is mopping

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Q177

The random change in allele frequencies is known as?

A

genetic drift

B

diversity

C

linkage

D

all of these

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Q178

What is meant by HIV-Positive ?

A

a person have AIDS

B

a person having two positive tests for HIV

C

a person can transmit the HIV

D

a person is safe from AIDS

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Q179 Which of the following structures helps cyanobacteria to move?

A flagella

B capsule

C gas vesicles

D all of these

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Q180

In a dihybrid cross, what fraction of offspring will display both recessive phenotypes?

A

 $1/8$

B

 $1/4$

C

 $1/32$

D

 $1/16$

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Q181

A muscle of fascicle is a:

A bundle of connective tissue

B bundle of myofibrils

C bundle of muscle fibers

D muscle cells

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Q182

Globular proteins differ from fibrous proteins in?

A non-crystalline

B more amino acids

C peptide bonds

D soluble in aqueous medium

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Q183

A body is moving in a circle at constant speed. Which statement is true?

A It accelerates away from the centre of the circle

B It accelerates towards the centre of the circle

C It does not accelerate

D none of these

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Q184

Diffraction is prominent when the wavelength of light is:

A five time small as compared with the size of the obstacle

B large as compared with the mass of the obstacle

C large as compared with the size of the obstacle

D one half as compared with the size of the obstacle

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Q185

Calculate the charge passing through the circuit if it's current is 10 Amp and the recorded time is 15 seconds

A 1500 Coulomb

B 150 Coulomb

C 13400 Coulomb

D 140 Coulomb

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Q186

A body at temperature T radiates heat according to relation

A

 T^{-2}

B

 T^4

C

 T^{-4}

D

none of these

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Q187

Most of the enzyme reactions are_____?

A

Reversible

B

Irreversible

C

Condensation

D

Oxidation

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Q188

Much _____ been said in the news reports.

A were

B have

C has

D was

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Q189

Choose the correct spelling of the word

A anniversary

B anniversery

C anniversary

D aniversry

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Q190

This summer our vacation should be both exciting and restful.

A complex

B simple

C compound

D compound-complex

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Q191 Who is _____ lady in _____ picture?

A the... an

B a... the

C the... a

D the... the

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Q192

You _____ to have good manners.

A might

B should

C ought

D may

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Q193

Which one of the following have four sides

A

triangle

B

square

C

circle

D

right triangle

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Q194

Statements (I) The childrens are being aggressive today. (II) There is no specific limit for childrens to use mobile screens

A

Statement 1 is the cause and 2 is the effect

B

both of the statements 1 and 2 are independent.

C

Statement 2 is the cause and 1 is the effect

D

Both statements 1 and 2 are effects of some common cause

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Q195

A culture cannot exist without?

A

Knowledge

B

Customs

C

People

D

Faith

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Q196

Look at this series 14, 28, 20, 40, 32, 64. What number should come next?

A

52

B

56

C

96

D

128

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Q197

Look at this series: 53, 53, 40, 40, 27, 27, ... What number should come next?

A

12

B

14

C

27

D

53

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Q198

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A Both of them follows

B None of them follows

C Only I follows

D Only II follows

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Q199

Statement The Management of School M has decided to give free breakfast from next academic year to all the students in its primary section through its canteen even though they will not get any government grant. Courses of Action (I) The school will have to admit many poor students who will seek admission for the next academic year. (II) The canteen facilities and utensils have to be checked and new purchases to be made to equip it properly. (III) Funds will have to be raised to support the scheme for years to come.

A Only II and III follows

B Only III and I follow

C Only I and II follow

D Only I follows

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Q200

Complete the series A25, B625, C15625, _____?

A

D390625

B

D364748

C

D390524

D

D390525

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Q201

Statement: Most of the steel producing companies in the country have made considerable profit during the last financial year. Many Asian countries have been importing huge quantities of steel from Pakistan

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause

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Q202

What will be the meaning of 'walkaway'? If mignelasan means cupboard Lasanpoen means boardwalk Cuopdansa means Pullman1

A Lasandansa

B Poeinmigen

C Poenforec

D Cuopisel

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Q203

The units of Wien's constant is_____

A

 $m.k$

B

 m/k

C

 k/m

D

none of these

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Q204

An object has mass and charge. It is moving in the direction of some field. Which type of field exerts a force on the object?

- A electric and magnetic fields only
- B magnetic and gravitational fields only
- C electric and gravitational fields only
- D electric, magnetic and gravitational fields

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Q205

The density of an ideal gas falls as its temperature ____ and pressure _____

A decrease, increase

B increase, decrease

C falls, Constant

D constant, constant

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Q206

In the reaction of NaBH_4 with aldehyde and ketones, which of the following act as Nucleophile ?

A

 B^-

B

 H^-

C

 BH_2^-

D

 NaBH_3^-

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Q207

If anyone of the products concentration is plotted against time instead of reactants the curve obtained will be

A Parabolic

B Rising

C Falling

D Elliptical

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Q208

keen

A

thin

B

sharp

C

broken

D

fluffy

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Q209

Which of the following acid is used a coagulant for latex in the rubber industry ?

A

Acetic acid

B

Butyric acid

C

Propanoic acid

D

All of these

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Q210

What is the nature of Carbon present in Aldehyde is?

A

Nucleophilic

B

Electrophilic

C

Neutral

D

all of these

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